Weekly Summary Report
USEPA Oversight, Sauget Area 1, Sauget, IL
WA No. 239-RSBD-054V / Contract No. 68-W6-0025

Week Ending Friday, September 23, 2005

This report summarizes the Remedial Investigation/Feasibility Study (RI/FS) fieldwork conducted by Monsanto, Solutia, and their contractors from September 20, 2005 through September 22, 2005 at Sauget Area 1 (SA1) Sites. The current RI/FS work consists of a Supplemental Dense Non-aqueous Phase Liquid (DNAPL) Characterization and Remediation Study (Supplemental DNAPL Investigation). The original DNAPL Characterization and Remediation Study (DNAPL Investigation) was conducted in 2004. CH2M HILL provided field oversight on three days during the week.

Contractors Onsite

- Groundwater Services Inc. (GSI) (consultant/contractor to Monsanto/Solutia)
- Golder Associates (consultant for Monsanto/Solutia)

Work Performed This Week

GSI was onsite during the week conducting the DNAPL and light non-aqueous phase liquid (LNAPL) survey of existing wells at SA1 and the Solutia Krummrich Facility. Additionally, a NAPL recovery test was performed at one well where NAPL was observed. During the week, 16 wells were surveyed.

NAPL Survey

On September 20 through 22, 2005, GSI conducted a NAPL survey at the following piezometers that were installed during the 2004 DNAPL Investigation: A1-01, A1-03, A1-06 through A1-12, A1-15, A1-17, and A1-18. In addition, the SA1 bedrock well BR-H at Site H, and wells GM-33, GM-46 and DNAPL-K-4, located on the Krummrich Facility, were also surveyed.

The DNAPL and LNAPL survey consisted of the following measurements:

- A PID measured for the presence of organic vapors as the well cap was removed
- A water level indicator was used to measure the depth to water and total depth of well at each piezometer
- A Teflon bailer was lowered into the top of water present in the well, and the bailer was visually observed for presence of sheen or LNAPL
- A weighted cotton string was dropped to the base of each well, then observed for potential presence of staining on the string
- A Teflon bailer was lowered to the total depth of the well, and the bailer was visually observed for presence of sheen or DNAPL

At two of the wells, DNAPL-K-4 and GM-46, an indication of possible NAPL was observed. GM-46 displayed a slight sheen on the surface of the water but no recoverable NAPL. No elevated PID measurements, staining, or visible sheen was observed in the other wells surveyed during the week.

Because DNAPL-K-4 was observed to contain DNAPL, a recovery test was conducted on this well. Approximately 50 gallons of water were removed from the well and placed into a 55 gallon drum, staged next to the well, to allow the NAPL to partition from the water within the drum. GSI used a gasoline powered actuator to pump the water from the well. Testing on recovered DNAPL, if sufficient volume is present in the drum, will begin during the upcoming week.

During the NAPL survey, the breathing zone was monitored using a calibrated PID and Tyvek® chemical retardant suits were worn during recovery activities at well DNAPL-K-4

Work Anticipated Next Week

Field activities were cut short during the reporting period as the GSI field personnel traveled back to Houston to prepare for the approach of Hurricane Rita. Field activities are anticipated to resume next week, and these activities will consist of completing the NAPL survey at eight remaining wells or piezometers, performing NAPL recovery tests at BR-I, completing an attempt to recover DNAPL from DNAPL-K-4, and cleaning the interior of BR-I.

The completion of a down-hole video survey at BR-I and the installation of the one additional piezometer are scheduled to occur during the weeks of October 3 and 10, respectively.

TABLE 1
DNAPL Survey of Existing Wells, Oversight of Field Measurements for the Week Ending September 23, 2005

Area	Well ID	Site	Date Surveyed	NAPL Observations	Comments
Krummrich Facility	GM-33		9/21/2005	None observed	
	GM-46		9/21/2005	Slight sheen	Slight sheen on outside of bailer and on the top of water was observed.
	DNAPL-K-4		9/21/2005	NAPL observed	Well was purged and NAPL/water was placed in a 55 gallon drum to allow any DNAPL to partition. Testing and sampling of the DNAPL, if present, will be conducted during the upcoming week.
SA1	A1-01	Site H	9/20/2005	None observed	
	A1-02	Site H			
	A1-03	Site H	9/20/2005	None observed	
	A1-04	Site L			
	A1-05	Btwn Sites[1]			
	A1-06	Site I	9/20/2005	None observed	
	A1-07	Site I	9/20/2005	None observed	
	A1-08	Site I	9/20/2005		
	A1-09	Dwngr Site I	9/20/2005	None observed	
	A1-10	Site I	9/20/2005	None observed	
	A1-11	Site I	9/20/2005	None observed	
	A1-12	Dwngr Site I	9/20/2005	None observed	
	A1-13	Site G			
	A1-14	Site G			
	A1-15	Site G	9/20/2005	None observed	
	A1-16	Site G			
	A1-17[2]	Dwngr Site G	9/20/2005	None observed	
	A1-18	Dwngr Site G	9/20/2005	None observed	
	BR-G	Site G			
	BR-H	Site H	9/20/2005	None observed	
	BR-I	Site I			

Notes:
Dwngr – indicates well location is downgradient of the waste/fill area for each Site
[1] Boring is located between Sites G, H, and L, east of Dead Creek
[2] Shallow piezometer located near existing well EE-11, where LNAPL was observed.

Photos from September 20 and September 21, 2005:

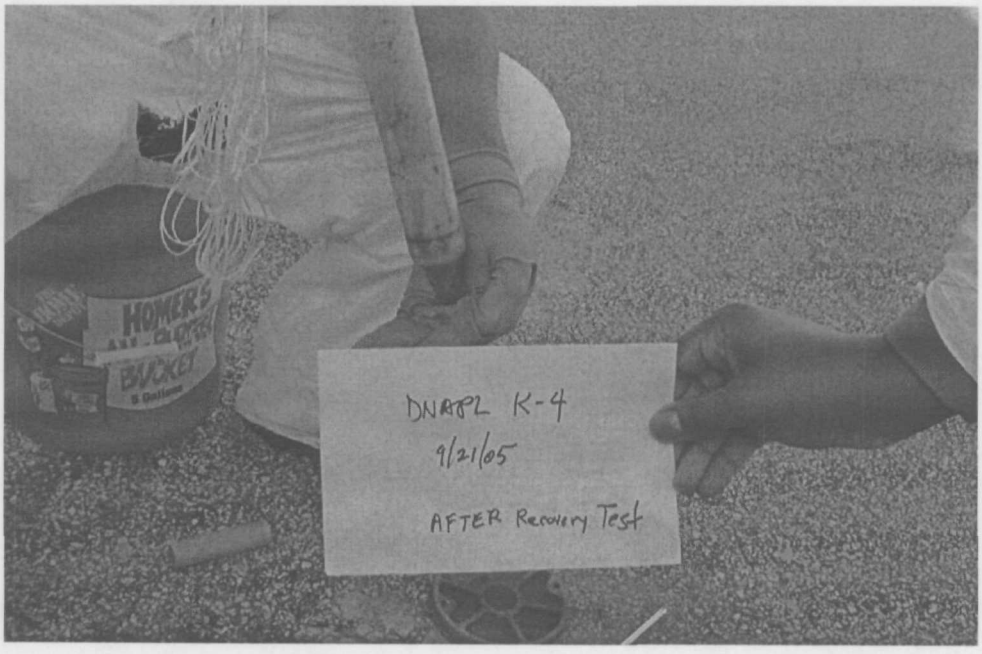
Checking depth to water at well A1-06 at Site I, SA1 (September 20, 2005)

Performing the string test at well GM-33 located on the Krummrich Facility (September 21, 2005)

Water from bottom of well GM-46 located on the Krummrich Facility poured into a plastic bottle to observe trace NAPL (September 21, 2005)

Water and NAPL in bailer from bottom of well DNAPL-K-4 located on the Krummrich Facility (September 21, 2005)

Purging to perform recovery test at DNAPL-K-4 at the Krummrich Facility (September 21, 2005)



Water and DNAPL observed in bailer from bottom of well DNAPL-K-4 located on the Krummrich Facility after recovery test was completed (September 21, 2005)

Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

September 19 through September 26, 2005

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors between September 19 and September 26, 2005, at Site R, Sauget Area 2 (SA2). As described in this report, some of the activities were performed as part of an ongoing Supplemental Investigation (SI) that is being conducted by the SA2 Sites Group (SA2SG) across the SA2 Sites.

Contractors Onsite

Golder Associates Inc. (groundwater consultant to Solutia)
URS (primary consultant for Solutia)

Work Performed This Week

Site activities during the reporting period consisted of the following:

- Sampling of 11 barrier wall groundwater monitoring wells to complete the second quarterly performance verification groundwater monitoring event. A twelfth monitoring well was dry and could not be sampled.
- Collection of 9 surface water and sediment samples from the Mississippi River to complete the first biannual performance verification Mississippi River sampling event. This sampling event included additional sample locations for the SA2 SI that were collected on a one-time basis per an agreement among the SA2SG, U.S Environmental Protection Agency (USEPA), and Illinois EPA (IEPA).

Quarterly Performance Verification Groundwater Sampling

Golder was onsite during the week conducting the second of the quarterly groundwater monitoring events under the Performance Standard Verification Plan (Volume 3 of the July 2003 GMCS Final Design Submittal). Eleven barrier wall monitoring wells (BWMW) in four clusters of shallow, middle, and deep wells were sampled during the week. The four clusters are labeled BWMW-1 through BWMW-4, with each cluster consisting of monitoring wells screened in the Shallow, Middle, and Deep Hydrogeologic Units. Golder attempted to collect a sample from BWMW-4S on two occasions during the week but was unsuccessful due to an insufficient quantity of water in the well.

Monitoring wells were purged using low-flow techniques and an adjustable flow-rate down-hole pump. Water quality parameters including pH, temperature, specific conductivity, and turbidity were measured and recorded during purging. Following purging for at least one hour or after a turbidity value of less than 5 NTU was achieved, the well was sampled. Samples were collected for analysis of volatile organic chemicals (VOCs), semi-volatile organic chemicals (SVOCs), pesticides, herbicides, metals, total organic carbon (TOC), and total dissolved solids (TDS) by

Severn-Trent Laboratories. Investigation-derived waste (IDW) was containerized in 55-gallon drums and staged onsite.

Purged groundwater was observed to contain a strong odor at monitoring well cluster BWMW-2 with a yellow color. Turbidity was found to sufficiently decrease to low levels prior to sample collection at most well locations.

Biannual Performance Verification and SI Surface Water and Sediment Sampling

URS was onsite during the week conducting the first of the biannual surface water and sediment sampling events under the Performance Standard Verification Plan. Concurrently, URS collected additional samples on a one-time basis under the SI as agreed upon by the SA2SG, USEPA, and IEPA. Surface water and sediment samples were collected at nine locations: PDA-2, 3, 4, 5, and 9 under the Performance Verification program, and R3AM, R3BM, R3CM, PDA-9A and American Bottoms Regional Treatment Facility (ABRTF) effluent as part of the SI.

A Trimble Global Positioning System (GPS) unit with sub-meter accuracy was used as a navigation tool to locate the R3M transect sampling points based on coordinates recorded during the original 2002 SA2 Remedial Investigation (RI). Coordinates for the PDA samples were not listed in the Menzie-Cura Ecological Risk Assessment (ERA) Report. During the reporting period, these samples were located using an aerial photograph / sample location map from the Menzie-Cura ERA Report and scaling the distances between the previous sample locations and site features displayed on the report figure. GPS coordinates for these samples were recorded for reference during future performance verification sampling events.

Surface water samples were collected at the surface water-sediment interface using a peristaltic pump and tubing connected to the clamshell sediment collector. The clamshell was gently submerged to total depth, leaving the tubing intake approximately one foot from the river bottom. The water was purged at an approximate rate of 200 milliliters per minute (mL/min) during collection of VOCs and at 500 mL/min for the remaining analytes. Water quality parameters were measured with a Horiba U-20 instrument. The probe was submerged adjacent to the tubing intake and allowed to equilibrate. Measurements were recorded one time during the sampling event and consisted of pH, specific conductivity, temperature, dissolved oxygen and turbidity. Turbidity measurements typically ranged from approximately 80-130 NTUs. An effluent grab sample was collected with a four-foot bailer from the deep, southern edge of the flume at ABRTF. Water quality parameters were not measured at this location.

Sediment samples were collected from the area below the surface water location using a winch and metal clamshell. The clamshell was lowered to the bottom of the river with a winch and opened to collect sediment. URS transferred the sediment to a stainless steel bowl where the samples bottles were filled. URS noted the depth of the river at the sample locations and briefly described the sediment type.

Samples were sent to Severn-Trent Laboratories for analysis of the routine suite of parameters including VOCs, SVOCs, pesticides, herbicides, and metals. Metals will be filtered in the laboratory.

TABLE 1
Surface Water and Sediment Samples

Sample ID	Date	Sample Location	Significant Observations	Notes
R3AM	09/21/05	Approximately 4 feet from original location[1]	Strong "oily" odor; black-gray	
R3BM	09/21/05	Less than 20 feet from original location[1]		
R3CM	09/21/05	Approximately 50 feet southwest of original location[1]		Barge obstructed original location
PDA-2	09/22/05	Approximately 340 feet north of southern power line; between 50 and 90 feet offshore	Odor	
PDA-3	09/22/05	Approximately 280 feet north of southern power line; approximately 140 feet offshore	Slight odor	10 clamshell buckets needed for sufficient sediment
PDA-4	09/22/05	Approximately 200 feet west of PDA-2 GPS location	Slight odor	
PDA-5	09/22/05	In line with stern of most downstream barge on Menzie-Cura photograph; approximately 70 feet offshore		
PDA-9	09/22/05	One barge length from the most downgradient dolphin in cluster shown on Menzie-Cura photograph; approximately 100 feet between barge and boat	Surface water sample more turbid (~500 NTU) due to active upstream sand dredger	
PDA-9A	09/22/05	Approximately 150 feet offshore, approximately 300 feet north of ABRTF diffuser		
ABRTF effluent	09/26/05	ABRTF flume		VOC samples were collected in unpreserved VOAs

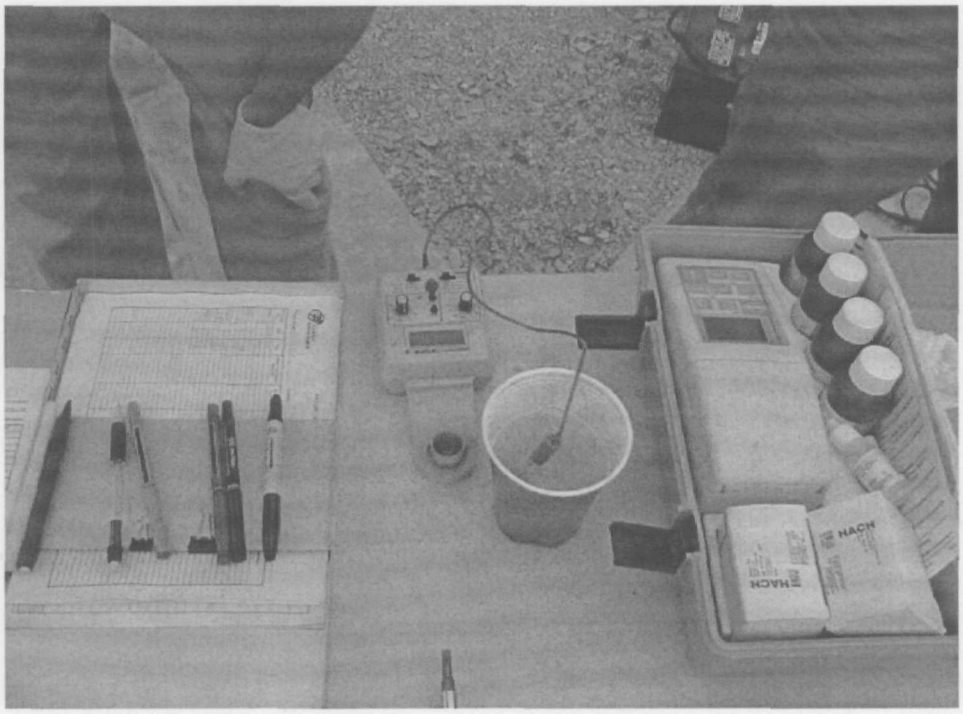
1 – Original locations correspond to 2000 Menzie-Cura ERA sampling locations for PDA samples and 2002 RI locations for R3AM, R3BM, and R3CM samples. Variations from original locations were caused by drift of the sampling boat or barges that prohibited access to the desired sampling locations.

Other Significant Observations

During surface water and sediment collection activities, areas of apparent environmental impact were observed along the bank of the Mississippi River. Several small seeps along the riverfront, at the approximate midpoint of Site R boundary, were observed to have an iridescent sheen. A larger impacted area was observed at the intersection of the shore with a wing dam along the Mississippi River. This area had pooled water which emitted a strong chemical odor.

Photos from September 19 through September 23, 2005:

Golder measures water quality parameters at BWMW-1 cluster (September 20, 2005).



Groundwater purged from the BWMW-1S cluster was initially observed to be dark and sediment-laden, but cleared up prior to sample collection (September 21, 2005).

URS collects a surface water / sediment sample near the barges at PDA-9 (September 22, 2005).

URS prepares to collect a sediment sample at location PDA-2 (September 22, 2005).

An effluent grab sample was collected by URS from the ABRTF flume (September 26, 2005).

A sheen and a strong odor were observed near the wing dam along the Mississippi River (September 22, 2005).

A few seeps with an iridescent sheen were observed at the approximate midpoint of the barrier wall alignment along the Mississippi River (September 21, 2005).